

ADAPTIVE MANAGEMENT: DISCOVERING THE NEW
SOURCES OF PROFITABILITY IN A COMPLEX, UNCERTAIN
AND CHANGING WORLD

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Adaptive Management

*Discovering the New Sources of Profitability
in a Complex, Uncertain, and Changing World*

by

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Three years ago we initiated at the Sloan School of Management at MIT a dialogue among a set of very senior executives and faculty members to identify the key issues that managers were facing and the resulting challenges they imply. What brought us together was a desire to align the existing business models with the current managerial concerns. We wanted to explore in-depth the forces confronting business worldwide, and to identify whether existing business frameworks were being responsive to the managerial issues facing modern managers. Sitting at the table were executives who shared a number of common interests and backgrounds. All of them were very experienced senior managers. All of them shared an intellectual desire to comprehend the driving forces that were acting upon their business environments and that were affecting so deeply their personal lives.

What resulted from these discussions was the emergence of a coherent picture that was deeply common to all of them. A world that defies, nonetheless, a clear definition because the only common denominator was a continuous and inexorable change. Change that was taxing their lives and pressuring them to the limits of their natural capabilities. A world that was ever more demanding, more unpredictable and more complex. A world in which the conventional theories and business practices were not providing the necessary guidance and support for decision making.

Conventional Strategic Positioning: Best Product

The most influential framework in strategy, espoused by Michael Porter¹, has been based upon recognizing two exclusive ways to compete: low cost or differentiation. This taxonomy has dominated contemporary strategic thinking. Low cost is achieved through aggressive pursuit of cost reduction: from experience, construction of efficient-scale facilities, cost and overhead control, avoidance of marginal customer accounts, and cost minimization in areas such as R&D, service, sales force, advertising, and so on. Differentiation calls for creating something that is perceived industry-wide as being unique. Approaches to differentiation can take many forms: design of brand image, technology, features, customer service, dealer networks, or other dimensions.

Although low cost and differentiation call for fairly distinct strategies, we can collapse them into one option, which we refer to as the "Best Product" strategic position, because it centers entirely on product economics. Customers are attracted by a low price, or by the differentiating characteristics in the product that go beyond price. The Best Product strategy continues to be a relevant one, the problem is that in the current environment it does not

describe all the ways companies compete in today's markets. Two companies illustrate this point.

Microsoft has its supporters and detractors, but on this one point everybody agrees - it has been a phenomenal business success. It is perhaps the model for success for a modern business in a complex environment. By 1996, Microsoft had created \$119 billion of market value in excess of debt and equity. It beat the all powerful IBM at its own game, and it created one of the richest men in the world in the process. Did they do this by having the Best Product? Microsoft does not have a 90% share of the market for personal computer operating systems because of low price . While they may have an effective cost infrastructure, no one would argue that their position was based on being the low cost provider. On the other hand, few would argue that their operating systems, and most certainly the MS DOS product that fueled their dominance, had the best features or was the easiest to use. In fact, many would say Apple had the best set of differentiated features. Nonetheless, Microsoft is unambiguously the market leader. The source of their success is a distinctive competitive position that is not Best Product, but rather one that is supported by the economics of the system as a whole and one which we label System Lock-In.

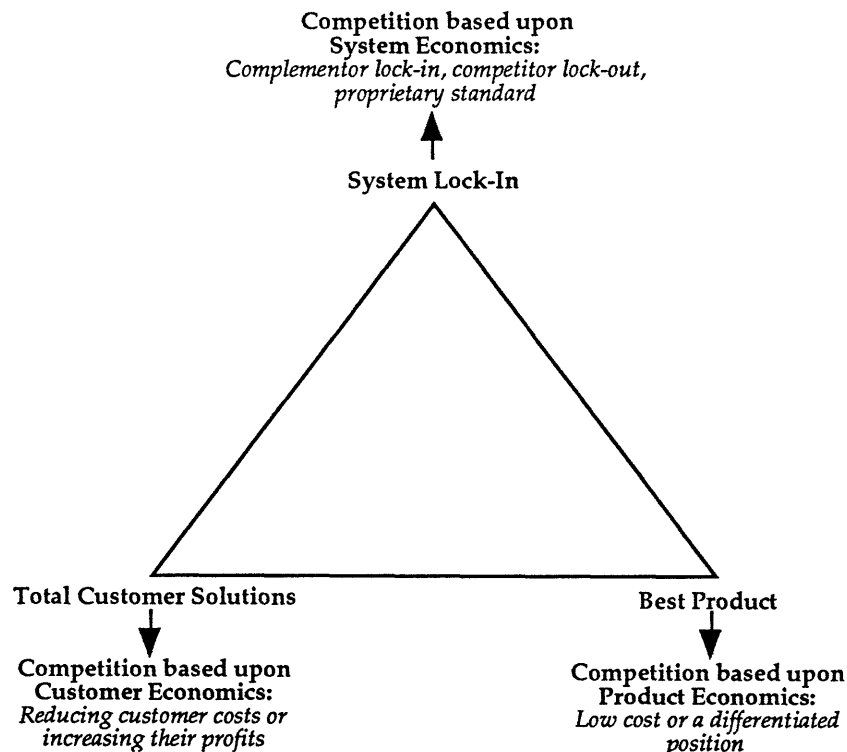
Worldcom is a small telecommunications company with a huge market value. Over a short ten-year period they have grown to \$30 billion in market value, with about \$7 billion in annual revenue. This is remarkable ratio of value to sales when compared to others in the same industry. AT&T, the market leader, has \$80 billion in market value and \$60 billion in sales. How did Worldcom do this? The predominant activity in Jackson, Mississippi, Worldcom's headquarters, is acquisitions - Worldcom has acquired over 30 companies since its inception in 1985. The focus of the acquisitions was not to create the lowest cost product. On the contrary, their acquisitions have expanded the breadth of their products from long distance, to include local through the acquisition of MFS and Brooks Fiber, Internet through the acquisition of UUNet and ANS, and data services through the acquisition of WiTel. They now have a small product market share across many products. The focus of the acquisitions was not on product differentiation. In fact, each of the products could almost be considered commodities when weighted against their respective competitors. Notwithstanding this, Worldcom created enormous market value by pursuing a distinctive competitive position in their industry. This position is not Best Product, but rather one that is based upon a focus away from the product and toward the customer which we label Total Customer Solutions.

These two distinct approaches give rise to a new business model that better reflects the multiple ways to compete in today's economy.

The Triangle: A Business Model For Creating a Distinctive Strategic Vision

The Triangle represents a business model that fills a significant void in the development of strategic thinking. It offers three potential options: Best Product, Total Customer Solutions, and System Lock-In (see Figure 1). This starting point is essential to the dialogue leading to the definition of the strategic positioning of a business.

Figure 1
Business Model: Three Distinct Strategic Options Pricing



The Best Product positioning builds upon the classic forms of competition through low cost and differentiation. Its relevant economic drivers are centered on the product or service. Cost leadership is achieved through the aggressive pursuit of economies of scale, product and process simplification, and significant product market share which allow us to exploit experience and learning effects. Differentiation is obtained by enhancing product attributes in a way that adds value to the customer. This differentiation can be achieved through

technology, brand image, additional features, or special services. Every strategic option searches for the attainment of some degree of bonding to the customer, which is reflected through a significant switching cost. Through the Best Product option, customer bonding is obtained by the intrinsic superiority of the product or service. A very important aid for this purpose is rapid product introduction, "first to market", and the establishment of the so-called dominant design².

The Total Customer Solutions strategic position is based upon a wider offer of products and services, which hopefully satisfies most if not all of the customer's needs. This is more than just offering a portfolio of generic standardized products. Instead, we might offer a broad bundle of products and services that aim at targeting and customizing to the individual needs of a specific customer. In that respect, the most relevant performance measurement of this option is customer market-share. Customer bonding is obtained through close proximity to the client which allows us to anticipate the needs, and work jointly in developing the customer's new products. Bonding is enhanced by learning and customization. Learning has a dual effect: the investment the customer makes in learning how to use our product and services can constitute a significant switching cost; our learning of the customer needs will increase our abilities to satisfy his or her requirements. Both have a positive impact in the final bonding relationship. Often this strategic option calls for the development of partnerships and alliances, which could include other suppliers, competitors, and customers linked by their ability to complement a customer offering.


The System Lock-In strategic option has the widest possible scope. Instead of narrowly focusing on the product or the customer we are now concerned about all the meaningful players in the system that contribute to the creation of economic value in the industry in which the business resides. In this strategic position bonding plays its most influential role. Besides the normal industry participants - buyers, suppliers, channels, potential new entrants - we are particularly concerned with nurturing, attracting, and retaining the so-called "complementors"³. The complementor is not a competitor, it is a provider of products and services which enhance our own offering. Typical examples would be computer hardware and software producers; high fidelity equipment manufacturers and CD disk providers; TV sets, video recorders, and video cassettes; telephone handsets and telecom networks. The critical issue here is to look at the overall architecture of the system in its broadest sense to see how one could gain complementors' share in order to gain competitor's lock-out and customer's lock-in. The epitome of this position is the de-facto proprietary standard, ala Microsoft.

Although in reality these options are not mutually exclusive and a business could find itself with a blended strategy, it is useful to consider the three alternatives as distinct ways of competing - with different scope, scale and bonding - as explicitly recognized in Figure 2. The scope significantly increases as we move from Best Product to System Lock-In. In one extreme end of the Best Product position, where you opt for low cost, the scope is trimmed to a minimum. The scope expands to address product features as you move to a differentiated Best Product position. It further expands beyond the product to include the customer's activities in the case of Total Customer Solutions. We finally reach the broadest possible scope as a System Lock-In company where complementors are also included.

Scale has always been a critical strategic factor, typically measured as product market share as is appropriate when evaluating a Best Product position. In the case of Total Customer Solutions we need to turn our attention to our share of a customer's total purchases. For a System Lock-In position complementor share is the most crucial.

Ultimately bonding deals with the attraction, satisfaction, and retention of the customer. In the case of the Best Product this is done through the characteristics of the product itself. Total Customer Solutions achieves this through learning and customization. While in the System Lock-In position, the utmost bonding mechanism is the proprietary standard as we explain later. We call attention to the bonding dimension because this has seldomly been recognized as a specific factor in differentiating a strategic position. It is, however, a fundamental force is driving profitability and sustainability.

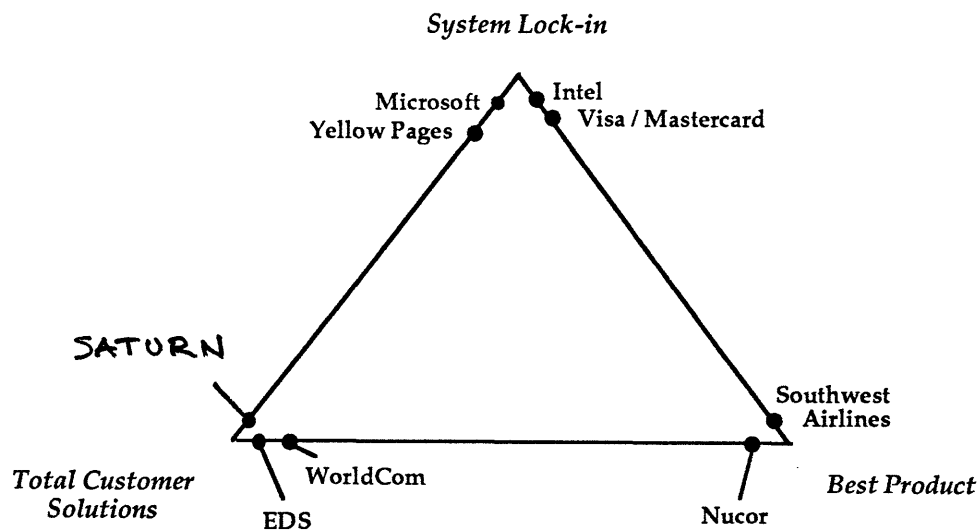
Figure 2
The Characteristics of the Three Options for Strategic Positioning

	Best Product	Total Customer Solutions	System Lock-in
Scope:	 Defeatured Fully featured - Low cost - Differentiated	Broad Product Range: - Bundling - Joint development - Outsourcing	Nurturing Complementors - Variety and number - Open architecture
Scale:	Product - Market share	Customer - Customer share	System - Complementor share
Bonding:	Link to Product: - First to market - Dominant design	Link to Customers: - Customer lock-in - Learning - Customization	Link to System: - Competitor lock-out - Proprietary standards

Using the Triangle to Understand Competitive Position

The distinct nature of the three competitive positions can be illustrated by looking at a number of companies which share the same outstanding business success, but which have achieved their high performance through strikingly different strategies and draw upon fundamentally different sources of profitability. Figure 3 illustrates these competitive positions.

Figure 3
The Triangle: Options for Strategic Positioning

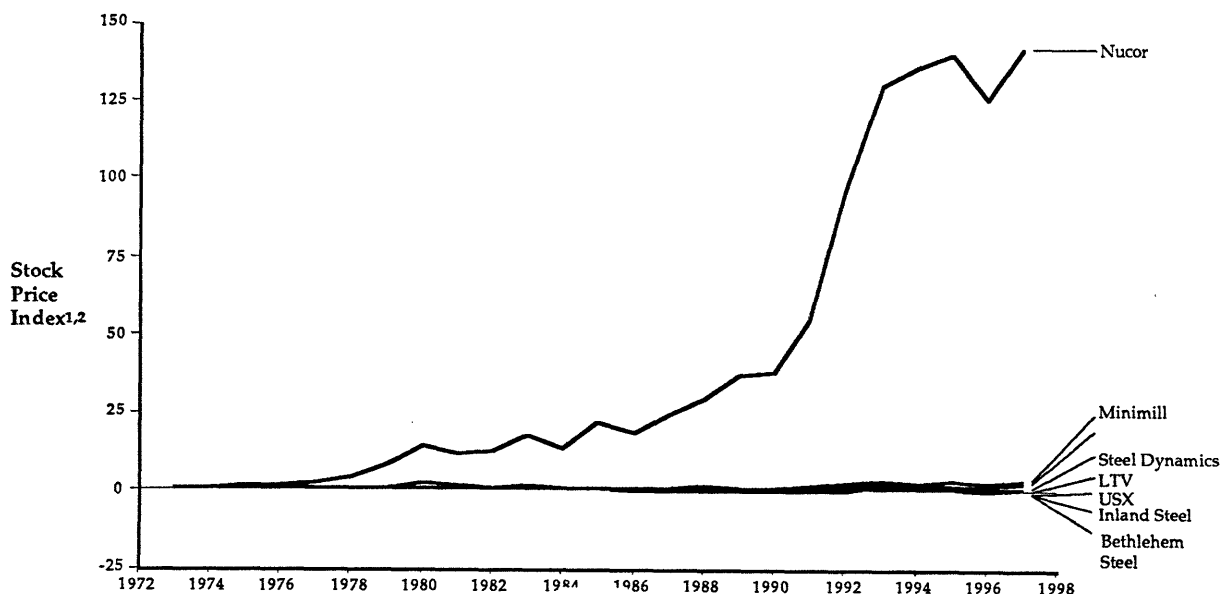


BEST PRODUCT

Nucor Corporation is the nation's fourth largest steel producer, and the largest mini-mill producer. They have a classic Best Product strategic position with the objective of being the lowest cost producer in the steel industry. They have costs which are \$40-50 per ton cheaper than the modern fully integrated mills. Their sales per employee is \$560,000 per year, compared to a \$240,000 for the industry. They have achieved this performance through a single-minded focus on product economics. According to John Correnti, Nucor's CEO, their low cost position is 80% due to a low cost culture and only 20% due to their technology. In fact, during Nucor's boom years, between 1975 and 1986, twenty five of its mini-mill competitors were closed or sold. Metrics reinforce this low cost culture. Throughout the corporation there is a strong alignment between the objectives and metrics critical to the strategy, namely to be low cost, and to the measurements and incentives for teams and individuals.

Nucor's financial performance resulting from this strategy is extraordinary for any industry, let alone steel. Before new management took over Nucor in 1966 the company was worth \$13 million in market value. Thirty years later this management and the processes they employed took Nucor to \$5 billion in market value, 35% compounded growth. Figure 4 shows Nucor's high growth in market value as compared to the industry.

Figure 4
Stock Performance Comparisons Among Nucor, Mini-Mill and Integrated Steel Companies



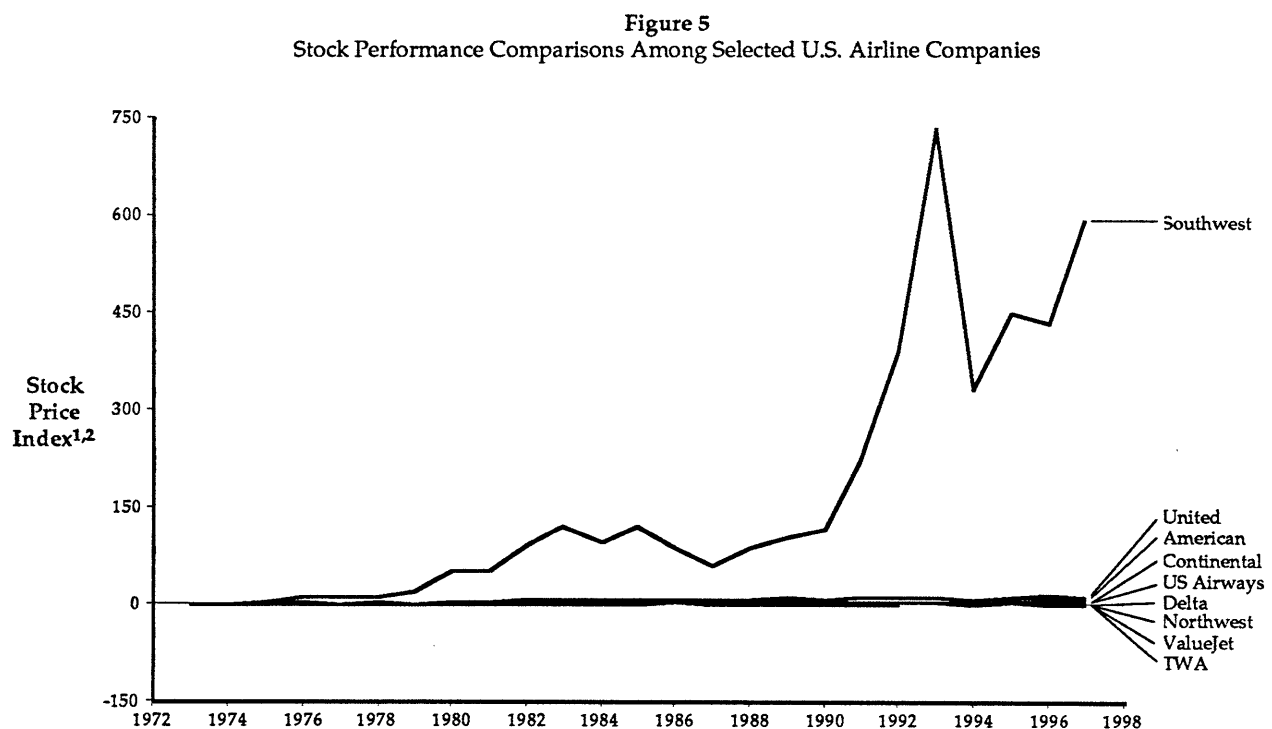
1 Base year is 1973 (=1.00), except otherwise noted in parenthesis

2 Closing date stock prices were used except for index starting after 1973 where IPO stock prices were used

Southwest Airlines is another example of phenomenal performance through a Best Product strategy. Again, they have demonstrated a relentless focus on product economics and a drive to reduce product costs, sometimes reducing the product scope and de-featuring the service in the process. For example, when they started service they eliminated baggage handling, passenger ticketing, advance reservations, and hot food. Staples of the major carriers, but items not worth their cost for many customers.

The remaining activities were performed differently. They emphasized shuttle flights that efficiently utilized an aircraft on repeated trips between two airports, rather than using hubs and spokes as did the full service carriers. They concentrated on the smaller and less congested airports surrounding large cities. They exclusively used the Boeing 737, rather than a diverse fleet of aircraft as did the established carriers, thus reducing the costs of maintenance and training.

Figure 5 describes the extraordinary performance of Southwest Airlines relative to the rest of industry.



¹ Base year is 1973 (=1.00), except otherwise noted in parenthesis

² Closing date stock prices were used except for index starting after 1973 where IPO stock prices were used

It is interesting to note that new companies may have an advantage over the existing firms in originating radically new strategic positions founded upon low cost. It may be easier for new organizations to redefine how activities are performed. Existing firms have embedded systems, processes, and procedures that are often obstacles to change and which normally carry a heavy cost infrastructure. Think of how many successful small companies have penetrated well established industries and promptly reached a position of cost leadership in a more narrowly defined product segment. This has been the case with Nucor and Southwest; with Dell and Gateway in personal computers; and with Wiltel in telecommunications. All of these companies show the same pattern: they narrow the scope of their offering relative to the incumbents, they de-feature the product, and they collapse the activities of the value chain by eliminating some and outsourcing others. With the remaining activities, they do them differently, with the hope that this will lead to either cost or product differentiation. Certainly doing things the same way is no way to achieve superior performance.

TOTAL CUSTOMER SOLUTIONS

This competitive position reflects a shift in strategic attention from product to customer, from product economics to customer economics and the customer experience.

Electronic Data Systems (EDS) is a transparent example of a Total Customer Solutions provider. EDS has achieved a prominent role in the data processing industry by singularly placing itself as a firm which has no interest with individual hardware or software companies. Their role is to provide the best solutions to cover total information needs, regardless of the origin of the components. In the process they have built up a highly respected record by delivering cost effective and tailor-made solutions to each individual customer. EDS's success, as well as those of other IT providers, has been so great that it has completely changed the perception of how to manage IT resources in most corporations. In the early stages of IT development, IT was regarded as the brain of the company, as such every firm was compelled to develop its own strong, internal IT group. Today, outsourcing of IT is commonplace and even expected.

As any good Total Customer Solutions provider, EDS measures its success according to how much they improve the customer's bottom line, or, in our own words, how they enhanced the customer's economics. Typically, they go into an organization which can be spending

hundreds of millions annually, and deliver significant savings while at the same time enhancing the current IT capabilities of the firm. This is an important achievement in an industry which is cost sensitive, rapidly changing, and extremely complex and sophisticated. Budgeting for internal resources in this environment is not straightforward, so outsourcing can look very attractive. They achieve these gains by extending the scope of their services to include activities previously performed by the customer. By virtue of their focus on IT, operations scale, and experience relative to the customer, they are able to offer services at a lower cost and/or higher quality than the customers themselves.

Worldcom provides a contrasting example of a Total Customer Solutions position. Where EDS has built value by expanding "vertically" their service scope into activities previously performed by the customer, Worldcom is an almost pure example of expanding "horizontally" across a range of related services for the targeted customer segment, in other words - bundling. The services have been bundled together to reduce the complexity for the customer. The customer benefits from a single bill, a single point of contact for customer service and sales, and potentially a more integrated, highly utilized network, but the products are the same. The company benefits through higher revenue per customer, longer customer retention, because it is harder to change vendors, and through lower cost customer care and sales. The success of their strategy is summarized in their market value. Worldcom has generated the second highest shareholder return in the past 5 year period, when compared to all other New York Stock Exchange companies. Clearly, Worldcom is following a strategy that is changing the rules of competition in the telecom industry and drawing upon new sources of profitability. They are attempting to shift the dimension of competitive advantage from one of product share to one of customer share, as shown in figure 6.

Figure 6
Market Positioning Matrix
– Product Share vs. Customer Share –

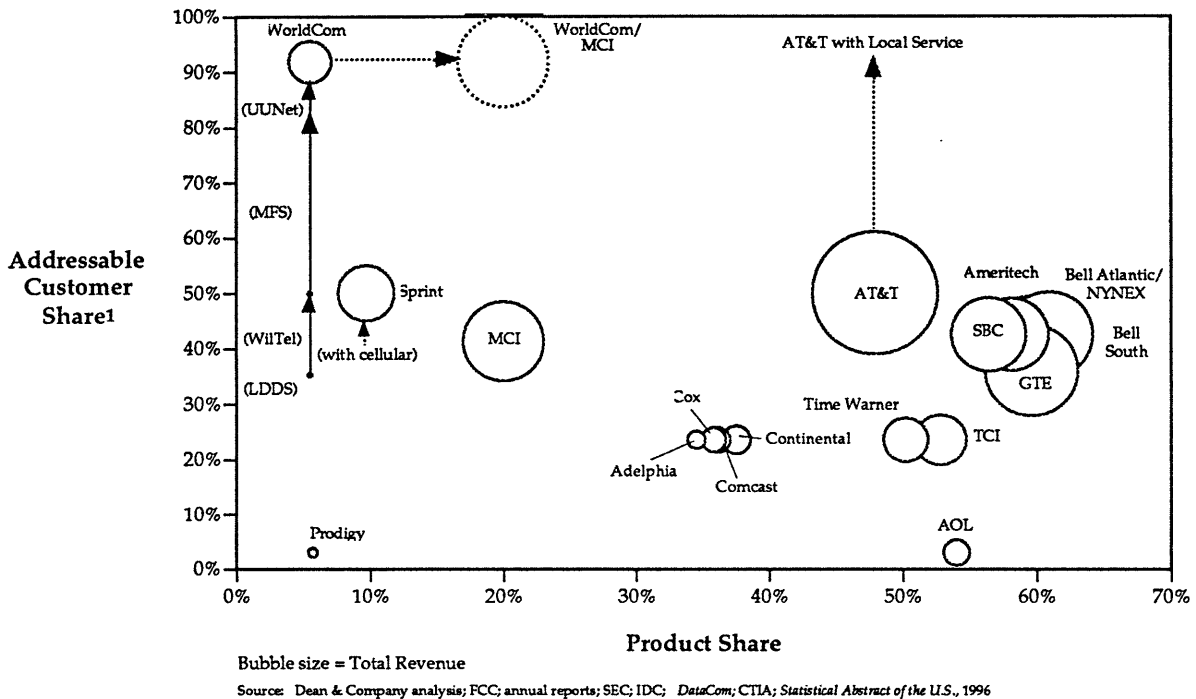


Figure 6 shows how telecommunications companies are positioning themselves. Undoubtedly, the most prominent player is AT&T with roughly 50% market share in long distance services, their leading product. The horizontal axis in Figure 6, measures product share, which is the critical measure for Best Product positioning. Because of the fragmentation of the industry, many of the competitors, including cable companies, local telephone companies, cellular, etc., are often one-product companies. This fragmentation uncovers two issues. First, there is no single dominant player across all products. Second, there are enormous opportunities for acquisitions, partnerships, and alliances in pursuing a Total Customer Solutions strategy. Companies are not expanding their scope by themselves. In fact, even the mighty AT&T is pursuing partnerships, such as with satellite TV; acquisitions, such as McCaw Cellular; as well as making huge internal investments to extend its product scope from long distance to include local, intra-lata, and on-line services. As they do this they gain potential customer share. This is shown on the vertical axis in Figure 6, which measures the share of the customer's total telecom purchases that a company is able to address given the scope of products and services.

This chart provides insights into the enormous dynamics unfolding in the telecommunications industry. If you took the conventional view, which is looking exclusively at the product share enjoyed by each company, you would come up with the wrong conclusion. You would assume there are a few strong incumbent players dominating each of their markets. However, the addition of customer share as a dimension of competitive advantage is destabilizing the industry. The resulting effervescence in the industry is increasing competitive rivalry and may lead to massive shifts in market share between businesses. Some experts are expecting product shares to drop by 30 to 40% for the companies in the local and long distance businesses, only countervailing actions in customer share can hope to maintain revenues.

As a third example of the Total Customer Solutions position consider Saturn, in our opinion one of the most creative managerial initiatives in the last ten years. Saturn abandoned a product focus and turned their attention to changing the customer's full life-cycle experience. Saturn made a deliberate decision to design a car that would produce a driving feeling as close to the Toyota Corolla or the Honda Civic as possible. Saturn was targeting satisfied owners of these Japanese car manufacturers and therefore wanted to make the transition as easy as possible. Inherently, Saturn abandoned the "Best Product" strategy as described earlier, in so far as they deliberately decided not to have a product that was different from the leading competition.

Saturn re-defined the terms of engagement with the customer, which obviously happens at the dealer. As any American buyer knows, purchasing a car can be one of the most unpleasant shopping experiences, subject to all kinds of uncomfortable pressures. Saturn undertook a most comprehensive selection of the dealership network; they chose their dealers from the list of the top 5% of dealers in America regardless of the brands they were representing. Saturn targeted them and offered extraordinary terms, which also included a major commitment on the dealer's part to learn the Saturn culture with in-depth, long stays in the Saturn manufacturing facilities, and to make multi-million dollar investments in the dealership infrastructure and information systems support. Many things happened in the formation of new dealer behavior. First, and not just symbolically, they changed the term "dealer", with the implicit connotation of negotiation and haggling, to the term "retailer", which connotes loyalty and fairness in customer actions. Next, they instituted a no haggling policy. Every car, and every accessory in the car, had a fixed price throughout America. In fact, the customer was educated on the features and price of the car and how it compared to competitors. They also established a complete re-zoning and expansion of the "retailer"

areas, thus limiting competition and allowing for more effective use of a central warehouse which would be shared by a circle of Saturn dealers to lower their inventory and costs. Additionally, they broke with tradition in the auto industry by offering a most remarkable deal: "Satisfaction guaranteed, or your money back, with no questions asked". They demonstrated this commitment to the customer in multiple ways. Perhaps the most dramatic one is when they implemented - for the first time in the history of the auto industry - a "full car" recall. They replaced the complete car, not simply a component. Furthermore, they issued this recall within two weeks of first finding symptoms of the problem.

Not surprisingly, the customer response was overwhelming creating what has become a cult among Saturn owners and thus giving Saturn the highest customer satisfaction in the industry, even above all the luxury cars - Lexus, Mercedes, BMW, etc. This is a phenomenal accomplishment for a car which retails for about one fourth of the luxury cars. Saturn's most powerful advertising campaign became the "word of mouth" of pleased customers, proving that the customer focus could be as strong a way to achieve competitive advantage as focusing on the product.

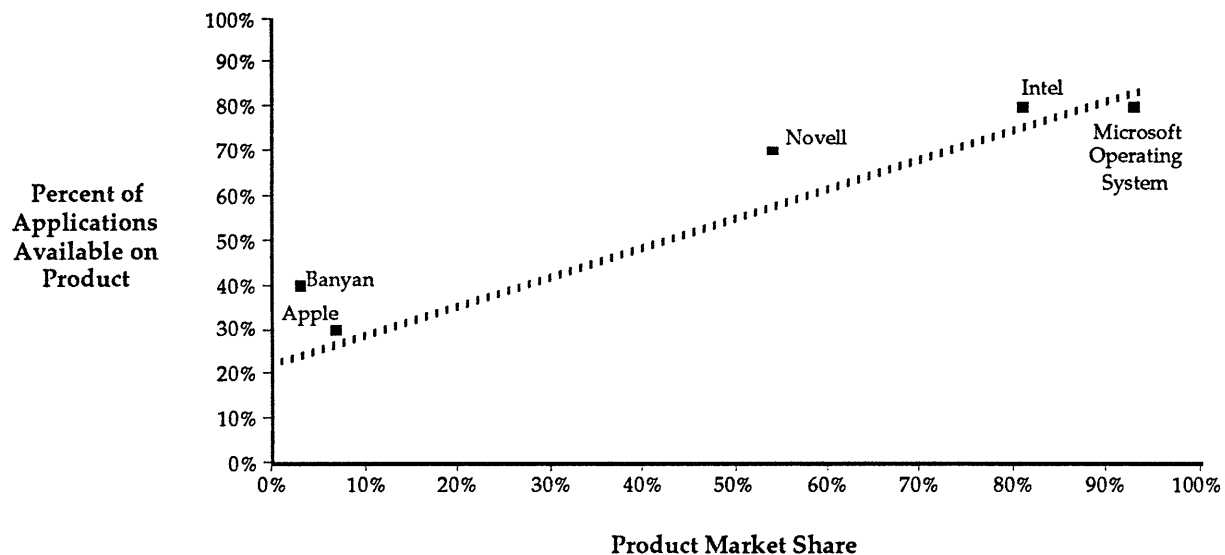
In essence Saturn's competitive position was not centered on the product, but on providing the customer a bundle of experiences and services that were unsurpassed by any of its direct competition. They lowered the customer's cost of buying and owning a car, through actions independent of the product itself.

SYSTEM LOCK-IN

In the System Lock-In corner, we show companies who can claim to own "de facto standards" in their industry. These companies are propelled by an economic whirlwind centered around their product or service. They are the beneficiaries of the massive investments made by other participants in the industry who complement their product or service. Microsoft is the best example. Eighty to ninety percent of the software applications are designed to work with Microsoft's personal computer operating systems. As a customer, if you want access to the majority of the applications you have to buy a Microsoft Windows operating system - and 90% of them do. As an applications software provider, if you want to access 90% of the market, you have to write your software to work with Microsoft Windows - and, as shown in figure 7, most of them do. This is a virtuous feedback loop that accelerates independent of the product it is spinning around. Microsoft does not win on the basis of product cost, product differentiation, or its total customer

solution, they have System Lock-In. Apple Computer has long had the reputation of having a better operating system, or the better product. Microsoft, nonetheless, has long held the lock on the industry.

Figure 7
Standards, Market Share and Profitability
(1996)



Company:	Banyan	Apple
Product Market Share:	3%	7%
Operating Margin:	18%	-14%

Novell '96	Novell '95
54%	61%
17%	42%

Intel	Microsoft
81%	93%
45%	41%

Source: Dean & Co., Value Line, SEC, Lexis-Nexis

Not every product or service can be a proprietary standard, there are opportunities only in certain parts of the industry architecture, and only at certain times. Microsoft, Intel, and Cisco have shown a shrewd ability to spot this potential in their respective fields and then relentlessly pursue the attainment, consolidation, and extension of System Lock-In. This has resulted in some of the most spectacular value creation in recent history. By 1996, Microsoft has created \$119 billion of market value in excess of the debt and equity investment in the company, Intel has created \$113 billion, Cisco has created \$33 billion. In 1995, these companies were ranked 5th, 12th and 27th in value creation among the 1000 largest, publicly owned companies in America. In contrast, IBM, while enjoying the ownership of a proprietary standard in the mainframe era, failed to spot and capture the emerging standards at the dawn of the PC generation. IBM's market value has suffered accordingly. By 1995 IBM was minus \$6 billion in market value creation, it ranked 997 out of the largest 1000 companies.

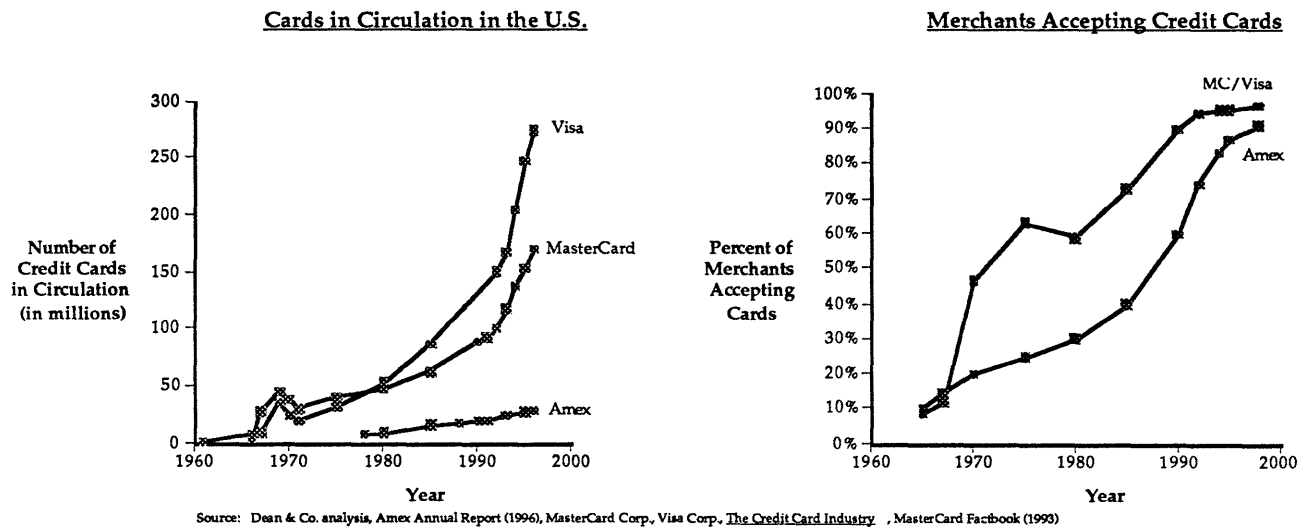
Standards are often discussed in technology intensive markets, but they occur in non-technology areas as well. As an example, the Yellow Pages is one of the most widely recognized directories and one of the most strongly held proprietary standards in the US. The Yellow Pages business enjoys massive 50% net margins, and is fundamentally a simple business. The Regional Bell Operating Companies, including Bell Atlantic, Ameritech, Bell South, etc., owned the business and outsourced many of their activities, such as sales and book production. In 1984 when the Yellow Pages market was opened for competition, there were many new entrants, including the companies that provided the outsourcing services. The experts predicted rapid loss of market share and declining margins. After the dust settled, the incumbent providers retained 85% of the market and the margins were unchanged. How did this happen?

The Yellow Pages books have tremendous System Lock-In. Businesses want to place their advertisements in the book with the most readership, and consumers want to use the book that has the most advertisements. When new companies entered the market they could distribute books to every household, but they could not guarantee usage. Even with steep 50 to 70% discounts, businesses couldn't afford not to continue their advertisements in the incumbent book with proven usage. Despite enhanced books with color maps and coupons, the consumers found the new books with fewer and smaller advertisements to have more size than utility and threw them out. The virtuous circle could not be broken and the existing books sustained their market position.

Credit cards show that financial services is another industry where standards have emerged and are a force in determining competitive success. The key players in the system are the merchants, the cards, the consumers, and the banks. American Express was a dominant competitor in the early history of cards, albeit with a charge card rather than a credit card. Their strategy was to serve the high-end business person, particularly those traveling abroad. This was captured by the famous advertising, "don't leave home without it", and supported by a world-wide array of American Express offices. They were providing something close to a Total Customer Solutions to an elite "club" membership. Securing a high share of merchants was not a part of the strategy. Visa and Mastercard took a different path. They designed an open system, available to all banks and aggressively pursued the acceptance of their cards by a wide array of merchants, in part through lower merchant fees. Figure 8 shows the results of this strategy which culminated with strong System Lock-In and the achievement of proprietary standards by Mastercard and Visa. Visa and Mastercard now

represent more than 80% of the cards in circulation. Consumers prefer the cards accepted by the majority of the merchants, and merchants prefer the card held by the majority of the customers.

Figure 8
The Credit Card Industry



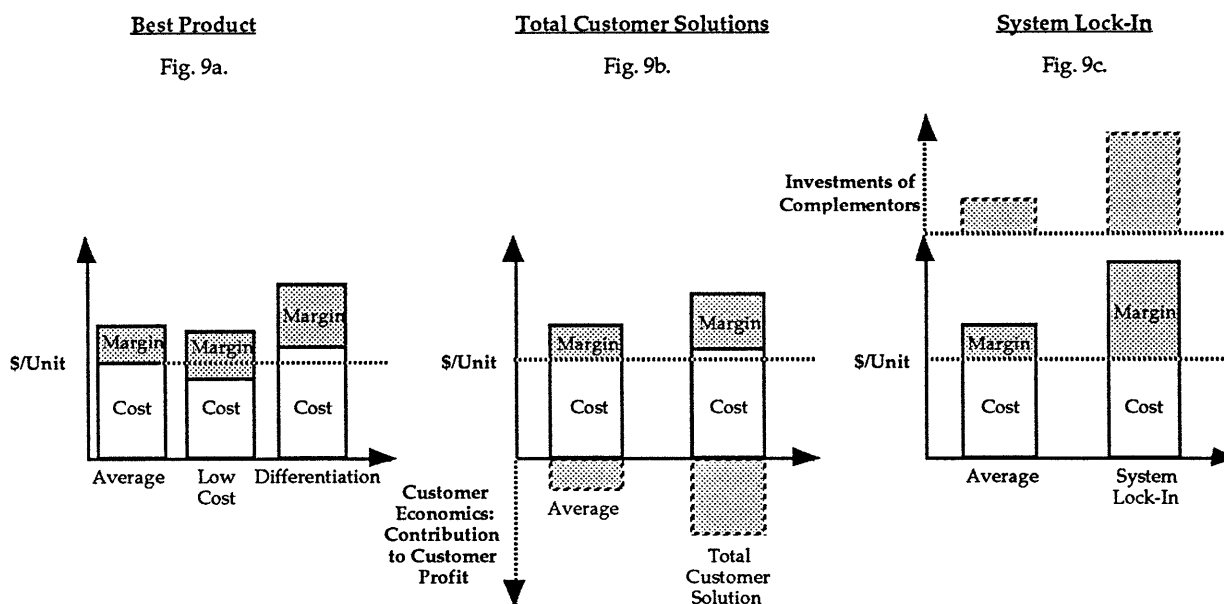
From the above discussions, one should not necessarily conclude that the pursuit of one strategic position is always more attractive than the other. There are big winners and losers in every option. Apple failed at owning the dominant operating standard. Banyan failed relative to Novell. The right option for a firm depends upon its particular circumstances.

Economic Perspectives of the Strategic Positions

The three strategic positions represent options which are focused on three distinct economic perspectives. The economic implications of the Best Product position are portrayed on Figure 9a. First, we see an average business performer which reflects the average cost of the industry and the margin available to the average player. We contrast this performance with the low cost competitor and the differentiated competitor; these two positions are the basic tradeoffs represented in this classical positioning. The lowest cost performer is able to obtain a higher margin while still competitively pricing the product. In fact, this is a strong competitive advantage because the efficiency of the cost structure allows pricing below the cost of the average competitor that in the long run might put the average performers out of business. This is why the alternative to low cost needs to be differentiation, offering unique product attributes that the customer values and will pay a premium for. Figure 9a shows how the differentiated player could have a higher cost than the average performer

while still enjoying a fairly high margin because of the inherent additional value of the product. While the graph is simplistic, it represents important economic hurdles: to have genuine low cost position you need to demonstrate lower relative unit costs; to have the economic leverage of a differentiated product you need to show clearly that the customer will pay more, and the premium is more than the added costs.

Figure 9
Economic Perspectives of the Strategic Positions



By contrast, the Total Customer Solutions position as represented in Figure 9b is centered on how products and services will impact the customer economics, either in by lowering the customer's internal costs or by allowing the customers to have higher revenue. The Total Customer Solutions provider may have higher costs, but these are far outweighed by the economic contributions to the customer. The economic hurdle here is to show measurable and positive impact on the customer's profit.

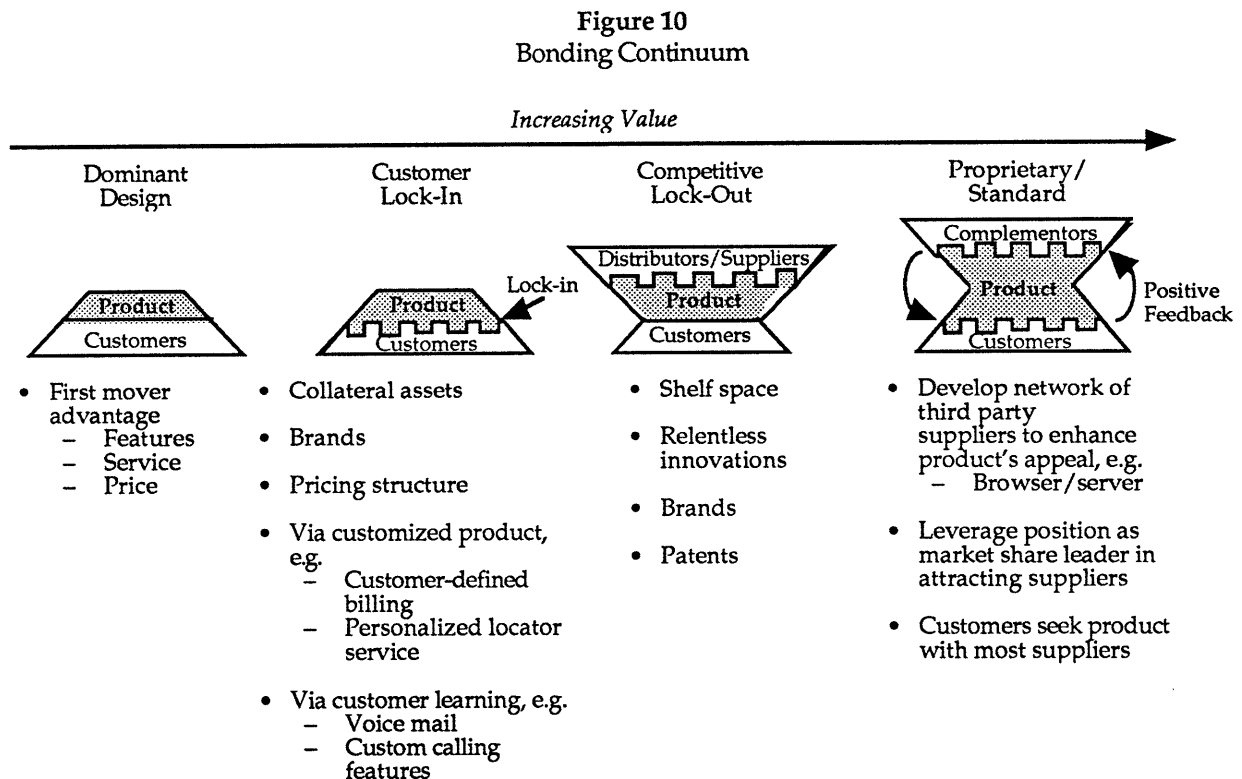
Finally, the economics of the System Lock-In position can be contrasted with the other alternatives by realizing that the scope is yet further enlarged to look at the total system that our products or services are part of. The economic hurdle is both to create additional value to the system as a whole through the heavy investment of complementors, and then to be able to appropriate this value. Figure 9c shows an average competitor whose complementors contribute modest value-added to the overall system. In contrast, the owner of proprietary standard has been able to promote significant investment by its

complementors which adds sizable value-added to its system. At the same time, its ability to appropriate this value-added is evident in its higher margins.

The Bonding Continuum: The Various Degrees of Product, Customer, and System Bonding

Bonding has been a primary element in the description of each of the three distinct strategic positions in the business model. It is such a central part of the ways in which companies achieve competitive advantage that it deserves closer examination. In fact, bonding is a continuum that extends from the first loyalty that a customer experiences toward a product, to a full System Lock-In with proprietary standards.

We have identified four stages in the bonding continuum as characterized in Figure 10.



The Dominant Design

In the first stage, that we have labeled dominant design, the customers are attracted to a product because it uniquely excels in the dimensions the customer deeply cares about. If the product positioning is one of low cost, it is the low price that leads to loyalty. If the strategic positioning is one of differentiation, it could be the features or services that

accompany the product that attract and retain the customer. In an embryonic industry that does not yet have a defined product design there is typically an enormous amount of experimentation that occurs in the offers of various competitors. This product variety eventually consolidate to a common design, one which has the features and characteristics that people learn to expect from that product type. This emerging dominant design captures the requirements of many types of users for a particular product, although it may not exactly meet the requirements of any particular segment of the customer base. In that regard the dominant design is a generic and standardized offer as opposed to a customized one. The competitor generating this design captures the first element of loyalty from customers, as well as the benefits of the first-mover advantage. As an example, IBM enjoyed the benefits of a dominant design with the IBM PC. Its format included a TV monitor, a standard disk drive, the QWERTY keyboard, the Intel chip, open architecture, and the MS DOS operating system. They came together to define the ideal PC for the market, which would later have to be emulated by every other PC-compatible manufacturer in the market.

Customer Lock-in

Beyond the stage of a dominant design, there are clear opportunities to achieve higher and more tangible switching costs on the part of the customer. One of the first such moves is to enhance the inherent characteristics of the product by surrounding it with additional support that makes it more accessible, more attractive, and thus harder to switch from. Collateral assets, which are assets the firm owns and complements the core product, can be effective in achieving this goal. Ownership of distribution channels, of specialized sales forces, of technical support staff, and, very importantly, a brand supporting image could significantly increase the product functionality, make it more appealing to the customer, and make the whole package much more difficult to imitate. Brands as a collateral asset can reinforce lock-in when the product is unfamiliar and the functionality unknown, so that the assurance of being supported can dissipate doubts about product performance and encourage repeat purchase.

National Starch is a Total Customer Solutions company that provides an excellent example of customer lock-in. At first sight, National Starch appears to be a company deeply rooted in rather mundane and pedestrian products. Its origin, as its name implies, can be traced to glue and starch. The reality, however, is quite different from the superficial first impression. If

is a company that has an unsurpassed history of long-term superior performance, not only in its industry, but also compared to most corporations in the USA.

The source of this success reside in having extraordinary technological capabilities that are coupled with an intimate knowledge of all of the key customers. The first time we conducted an audit review of the information control systems used by National Starch we were not impressed by the quality, breadth, and detail of the information that was being collected and processed for the executives. This was not what we would have expected from a company with such exceptional performance. So we went back to the drawing boards to find out what we missed. What we found was an enormous knowledge that was accumulated primarily by R&D personnel, technical service staff, and marketing and sales managers. This knowledge covered the needs of the customers, the state of new product development, and the ability of National Starch to provide unsurpassed assistance to add to the customer in the expansion of their revenues and the containment of their costs. They don't just produce adhesives and sell it by the gallon, the essence of their business is the joint working relationship with the customer.

One of the most spectacular products that has emerged from this relationship, was the development of a most sophisticated adhesive that eliminated welding the wings to the body of an aircraft. This product has two critical characteristic that explains why National Starch would get enormous margins from it. One, is the high contribution of this product to the total quality of the final product it is part of. Second, despite of its great criticality the product accounted for a negligible portion of the total cost of the airplane. When these two conditions are present you are facing a product with high profit potential.

The moral of the National Starch story, which is in the specialty chemical industry, is that by being creative in constructing a tight working relationship with the customer you can "de-commoditize" a product. The bonds which emerge are so strong because they are not just providing a product, but extends to embrace the customer's own activities and enhance the customer's economics.

Price structure can also influence bonding. Two of the most innovative marketing programs in the 80s were the frequent flyer program, which was initiated by American Airlines, and the "Friends and Family" promotion of MCI. They were widely acclaimed because they created some lock-in for traditionally commodity businesses. The frequent flyer program encourages flyers to continue using the same airline in order to accumulate sufficient

frequent flyer mileage points to earn a free flight. MCI's Friends and Family awarded discounts to customers who were calling other MCI customers on this same program. This certainly made it more difficult for customers to leave and added to MCI's growth.

Customization of the product and service can also enhance lock-in. This can happen through personalized services, customer care, and even billing. In the consumer market for the financial services industry, Customer Management Accounts provide a compelling example. Merrill Lynch first introduced these accounts, but Fidelity, Schwab, and other institutions followed suit. These accounts are tailored to the circumstances of the user; characteristics of bill payment, brokerage, mutual fund investments, IRA accounts, credit cards, and checking are customer specific and chosen by the customer. The effort to move this information to a new account creates a switching cost for the customer.

Learning is our last example of an approach to customer lock-in. There is great benefit to be derived from customer proximity, because the customer learns, as well as the supplier. As a result, the bonding increases over time and a newcomer finds it very hard to break into a relationship that has developed mutual investments and benefits to both parties. Additionally, the product can create its own learning. For example, once you learn how to operate the Lotus 1,2,3 spreadsheet applications there is a significant additional effort to switch to Microsoft's Excel program. This has, in part, been the sustaining force behind Lotus' market share in the spreadsheet market.

Competitor Lock-out

Locking out the competitor can further enhance bonding. There can be a thin line between customer lock-in and competitor lock-out. In the first case, we are assuring that once the customer is acquired, it is very hard to switch to an alternative competitor. In the second case, we want to create significant barriers for the competitor to imitate or to enter the business.

Four forces can contribute to competitor lock-out, as represented in figure 10. The first is based upon the restrictions imposed by distribution channels. Physical distribution channels, in particular, have limits on their ability to handle multiple product lines. At the extreme end of the spectrum you have channels that carry only one product, such as soda fountains which serve only one brand of soda. If Coca-Cola captures the channel, Pepsi is preempted from

that specific market and vice-versa. Although they are in a less extreme position, supermarkets have similar "shelf" constraints.

In this environment, brands can generate competitor lock-out. They create customer demand that causes retailers to stock the branded product, at the expense of competitive products given the physical constraints. In turn, the shelf presence further enhances demand and the brand, because people can only buy the products that are available. This reinforcing loop causes brands to be a particularly effective tool for consolidating share and creating system lock-in when the industry structure includes physical distribution channels, in contrast to when the industry uses direct channels such as telemarketing or direct mail.

Another way to establish competitor lock-out is to resort to a continuous stream of product innovation that could result in self obsolescence and create enormous barriers to imitation or entrance from new competitors. The origins of DEC provide a good example of competitor lock-out in an embryonic industry. During the 50's a group of engineers headed by Ken Olson produced the first mini computer. Working out of a modest warehouse in Maynard, Massachusetts, they started a technological revolution, and without knowing it they were seriously challenging the most formidable competitor in the computer industry, IBM. DEC was singularly driven by technology. Their engineers were given great freedom to both propose and follow through on their innovations. There was an unprecedented stream of new computers, with one breakthrough after another. They produced over 15 new versions in less than 6 years. Out of this process two significant sources of competitor lock-out developed. First, there was the difficulty of competition to pass this moving target. DEC was always ahead and moving faster. Second, there was a considerable investment that DEC users were making in software development. The first mini computer, the PDP-1, was dedicated to satisfying the computer needs of single users, that were experiencing the frustrations and delays of sharing a mainframe facility. The PDP-1 immediately attracted the interest of engineers and scientists working on their own specific problems that needed fast and effective computational capabilities. DEC was not addressing generic business applications, such as payroll, inventory, and accounting, which were the bread-and-butter of mainframe computers at that time. As a result, customers had to develop their own tailor-made software applications. Most importantly, all of the DEC computers were compatible with each other, therefore legacy software could run on the new generation equipment. The DEC architecture was not open, as are personal computers today which are assembled from commonly available components. The competitors thus had not only to match the

technical features, but also had to be compatible with the existing software base. In a short time of 10 years, DEC became the second largest computer company in the world.

Patents, of course, can also provide for competitor lock-out. Clearly, patents are a factor driving the attractive margins in the pharmaceutical industry, the archetype of a patent-based industry. This, however, is not without some challenges. Often a significant portion of the length of the patent is consumed before the product is released to the market because of the time required for trials and to seek FDA approval. It is not unusual for half the patent's life to expire before the product is introduced to the market. This dilemma is compounded when patents are required in a number of countries, each with different requirements for documentation, languages, testing, legal compliance, etc. In this situation, speed is a key factor leading to competitive lock-out.

Proprietary Standards

Proprietary standards are at the extreme of the bonding continuum. It represents the fulfillment of the most demanding objectives. If a firm is able to reach and sustain this position, the rewards are immense. We have already discussed a number of ways to achieve System Lock-In and to secure a proprietary standard which are the two conditions to be met in order to appropriate the major benefits from this strategic position. It is easy to presume that this would be the dominant of the three positions in our business model. However, one should not draw that inference too quickly. First, it is not always possible to develop a standard in every market segment. Second, even if a standard can be developed, it might not be possible to appropriate it by a single firm. Finally, not all firms have the capabilities to obtain a proprietary standard, it is a question of fit.

There are a number of characteristics to evaluate in assessing whether it is possible to obtain a proprietary standard:

- Does the business have an open architecture, or can it be created? An open architecture allows the attraction, development, and innovation of many complementors.
- Is there the potential for a large variety and number of complementors which can be enabled through a standard? The Microsoft operating system has over 100,000 software applications; Novell has over 3,000; each yellow pages book

has thousands of advertisements; HMOs contain thousands of doctors; Mastercard has millions of cardholders and hundreds of thousands of merchants. If there are only a few complementors, the switching costs of moving them to a different standard is low.

- Is the standard hard to copy? A complex interface which is rapidly evolving makes it difficult for competitors to imitate.
- Is the industry architecture being redefined? It was impossible for competitors to create a new Yellow Pages in a stable and well-defined market. When the industry eventually transforms, perhaps with the advent of electronic yellow pages, opportunities will again emerge to create a new proprietary standard.

The Triangle, by describing the three fundamental strategic positions, provides the mechanism to define the vision of a business - that elusive but indispensable requirement in successful management. The challenge here is to construct distinct business options that respond to the new realities of the current business environment.

Linking Strategy with Execution: Adaptive Processes

The next challenge is in linking strategy with execution. More strategies fail from ineffective execution than from poor design. There are two primary causes of failure. First, the basic business processes in the company are not aligned to the strategy. Over the past few years we have witnessed a proliferation of the so called best business practices, including total quality management, business re-engineering, continuous improvement, benchmarking, time-based competition, and lean production, to name just a few. These have been primarily addressed at improving the operational effectiveness of the firm. In theory and in application these practices are decoupled from strategy. As a result, they contribute to creating a pattern of commoditization as companies tend to imitate each other, thus preventing a truly differentiated strategic position. The Adaptive Management model gives a much broader message. It starts with a selection of a distinctive strategic position and then calls for the integration, not of one individual business process such as operational effectiveness, but of the collective processes. It is the balance of the fundamental processes that creates a unique and sustainable competitive position.

Second, complexity and uncertainty in the market creates a problem in the implementation of any plan. The only assumption that remains valid over time is that the other assumptions will change. The strategy needs to continuously adapt, and therefore the implementation itself needs to respond to the changes in the market, and to an improved understanding of the market that only becomes apparent during the implementation by the people in the field.

The Adaptive Management processes accomplish this critical mission of linking strategy with execution. It starts by i) defining the key business processes that are the repository of the primary operational tasks, ii) aligning their role with the desired strategic positioning, iii) seeking a coherent integration across these processes to produce a unifying sense of action, and iv) incorporating responsive mechanisms as a core part of each process to assure flexibility and change in an uncertain market. We will briefly introduce each of these components.

Three Fundamental Adaptive Processes

In the early 90s a crusade was launched behind an idea⁴ that was powerful in its simplicity: business should be viewed not just in terms of functions, divisions, or products, but also as processes. These processes - such as developing new products, delivering new products to customers, and managing customer relationships - cut across the standard organizational units in the firm, especially when the organizational structure is functionally driven.

We believe that the business processes are the central focus of attention when linking strategy and execution. A great deal of controversy surrounds the definition, and even the number, of the appropriate business processes in the firm. We have observed there are three fundamental processes which are always present and are the recipients of key strategic tasks, these are:

Operational Effectiveness: this process is responsible for the delivery of products and services to the customer. Conceived in its broadest sense, this process includes all of the elements of the supply chain. Its primary focus is to produce the most effective cost and asset infrastructure to support the desired strategic position of the business. It is the heart of the productive engine as well as the source of capacity and efficiency. Although its relevance is inarguable for all businesses, it becomes the central driver when the strategic position is Best Product.

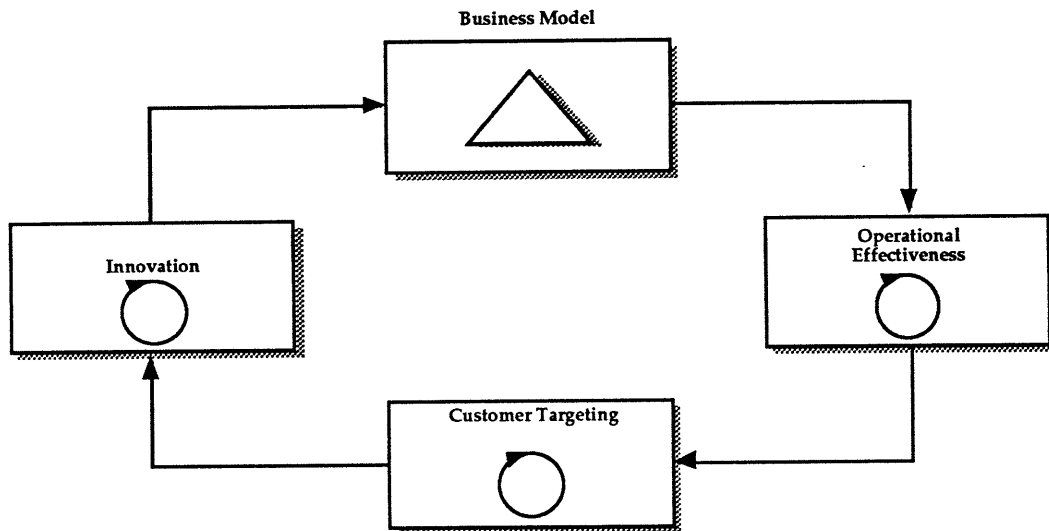
Customer Targeting: this process encompasses the large set of activities that are intended to attract, satisfy, and retain the customer. It assures that the customer relationships are managed in the most effective way. Its primary concern is to identify and select attractive customers, and to enhance customer performance, either by contributing to a reduction in the customer's cost base or by increasing the customer's revenue stream. The heart of this process is to establish the best revenue infrastructure for the business. While customer targeting is critical to all businesses, it becomes the central driver when the strategic position is Total Customer Solutions.

Innovation: this process assures a continuous stream of new products and services to maintain the future viability of the business. It mobilizes all of the creative resources of the firm including the technical, the production, and the marketing capabilities to develop an innovative infrastructure for the business. The heart of this process is the renewal of the business in order to sustain its competitive advantage and its superior financial performance. While preserving the innovative capabilities is critical to all businesses, it becomes the central driver when the strategic position is System Lock-In.

The Alignment of Adaptive Processes with The Strategic Position

The Triangle is the motor that drives the selection of the strategic positioning, which in turn defines the role of each of the Adaptive Processes, which encompass the supporting tasks necessary to achieve the business vision. The actions of the firm need to be aligned with the strategic position of the firm, and the results of these actions need to provide feedback to adapt the strategy. This is the essence of Adaptive Management, as shown in Figure 11. Consistency, congruency, and feedback are the guiding principles. As we will see, not only does the role of each process need to adapt to each strategic option, but also the sense of priorities with regard to each other is affected.

Figure 11
The Business Model and The Adaptive Processes



The role of each of the Adaptive Processes in supporting the strategic position of the business is illustrated in Figure 12. The strikingly different role for each process defies the common exhortations that one hears regardless of strategy. Let's examine one process at a time.

Figure 12
Role of the adaptive processes in supporting the strategic positioning of the business

Strategic Positioning		Best Product	Total Customer Solutions	System Lock-in
Adaptive Process	Operational Effectiveness	<u>Best Product Cost</u> <ul style="list-style-type: none"> Identify product cost drivers Improve stand alone product cost 	<u>Best Customer Benefits</u> <ul style="list-style-type: none"> Improve customer economics drivers Improve horizontal linkages in the components of total solutions 	<u>Best System Performance</u> <ul style="list-style-type: none"> Improve system performance drivers Integrate complementors in improving system performance
	Customer Targeting	<u>Target Distribution Channels</u> <ul style="list-style-type: none"> Maximize coverage through multiple channels Obtain low cost distribution Identify and enhance the profitability of each product by channel 	<u>Target Customer Bundles</u> <ul style="list-style-type: none"> Identify and exploit opportunities to add value to key customers by bundling solutions and customization Increase customer value and possible alliances to bundle solutions Select key vertical markets Examine Channel ownership options 	<u>Target System Architecture</u> <ul style="list-style-type: none"> Identify leading complementors in the system Consolidate a lock-in position with complementors Expand number and variety of complementors
	Innovation	<u>Product Innovation</u> <ul style="list-style-type: none"> Develop family of products based on common platform First to market, or follow rapidly – stream of products 	<u>Customer Service Innovation</u> <ul style="list-style-type: none"> Identify and exploit joint development linked to the customer value chain Expand your offer into the customer value chain to improve customer economics Integrate and innovate customer care functions Increase customer lock-in through customization and learning 	<u>System Innovation</u> <ul style="list-style-type: none"> Create customer and system lock-in, and competitive lock-out Design proprietary standard within open architecture <ul style="list-style-type: none"> Complex interfaces Rapid evolution Backward compatibility

Operational effectiveness is concerned with providing the lowest possible cost infrastructure. When it supports a Best Product strategy the imperative is to reduce the stand-alone product costs through careful attention to the product cost-drivers. However, in the case of Total Customer Solutions, Operational Effectiveness is further concerned with the horizontal linkages between products in the bundled offer. The ultimate goal is improving the customer's economics even if it sometimes raises the product's costs. The relevant cost focus is the combined impact on the customer's business as well as your own. In the System Lock-In strategy the product cost is perhaps the least relevant among all the positions. What is important here is the value of the system through the creation of standards, the investments of the complementors, and their integration to improve overall performance.

Using a data communication illustration, a provider of private lines which is seeking a Best Product position would focus on reducing the costs of maintenance to an absolute minimum, given certain quality guidelines. A Total Customer Solutions provider would look closer at the customer's activities. It turns out that faults can have a huge impact on some customer's cost, because they incur large internal expense in sectionalizing the fault, calling the right vendor, and then in running the back-up systems necessary to continue their business during the outage. The customer's costs can be reduced by adding equipment to help diagnose the fault or perhaps by large scale alternate back-up systems. In the situation of Intranet services, where customer is buying a highly secure private line network using Internet protocols, a company might attempt a System Lock-In position. Customers may find it increasingly expensive to switch or split vendors as they add applications and geographic locations to the same secure Intranet. Cost is less important than encouraging the customer to install more sites and to use more applications which run on your Intranet platform.

In the case of Customer Targeting, we observe an even more marked difference across strategies than we saw with Operational Effectiveness. We often hear that a firm should be customer focused, without any qualifications or conditions. When analyzing the changing requirements of customer targeting across strategic positions, one realizes how meaningless that statement is. Supporting the Best Product option requires maximizing product coverage through multiple channels, while achieving the lowest possible distribution cost. However, when supporting a Total Customer Solutions position we are seeking to target key customers by offering a bundled solution, either alone or through alliances. This requires targeting vertical markets and resorting to customized products as appropriate. Channel ownership itself becomes an issue, in order to gain greater knowledge and access to the customer. For instance, in 1993 Merck, one of the leading research-based pharmaceutical companies,

acquired Medco, a premier distributor of generic drugs. This allowed Merck to obtain the leading mail order catalog, have access to unique distribution, and gain ownership of a customer database covering patients, physicians, and proprietary formulary. When supporting System Lock-In, the key "customer" targets are the complementors in order to consolidate the lock-in position and to neutralize competitor's actions. In short, the customer that is targeted is fundamentally different in these three options. At times, the final consumer or user of the product, although important, is not the critical strategic target. For example, we all know that Microsoft is not universally loved by its customers. The power that is exercised by the owner of the systems standards give the end user few choices.

The software industry can help to further contrast these differences. Software game providers typically adhere to a Best Product strategic position, and employ Customer Targeting as a way to get access to as many customers as possible - getting access to the right channels is critical. American Management Systems (AMS), which has a Total Customer Solutions position, provides customized customer care and billing software and thus targets vertical markets. Novell, which has a System Lock-In position, has the proprietary standard for LAN operating systems and needs to put their premium effort on attracting and serving both application developers and the 30,000 Value Added Resellers that distribute NetWare.

Lastly, the role of innovation is quite distinct across strategic positions. We have said that innovation is concerned with the renewal of the business. When it comes to supporting a Best Product strategy, that renewal is expressed in terms of securing a continuous stream of a family of products, often sharing a common platform. If truly successful, that innovation will lead to the establishment of a dominant design which represents the strongest base for competitive advantage with a Best Product strategy. In the case of the Total Customer Solutions strategy, innovation plays a key role through the successful development of joint products with key customers. In this respect, this adaptive process is not only central for the future development of the customer base, but for the maintenance of the current customers. The role of innovation in System Lock-In is perhaps more critical than in any other strategic option. Often it is the power of technology that is responsible for designing the architecture that will generate the system standard, that will allow the ownership of that standard, and that will preclude the standard from becoming obsolete or copied. As we have indicated previously, it is more likely that a standard will be achieved if the architecture is based upon open interfaces and characterized by rapid evolution with backward compatibility. Clearly, technology-based innovation can play this role.

The semiconductor industry can serve as an example of how the roles for Innovation change with strategic position. Hitachi and NEC are among the leading producers in dynamic random access memory (DRAM) semiconductors. This segment has been characterized by short product life cycles and declining prices. To succeed, these companies develop new chips every 1 to 2 years, which employ technology 4X better than the previous generation, in facilities that now cost over \$1 billion to construct. These two companies are following the Best Product position and are pursuing a breakneck stream of innovation to support their competitive advantage. Motorola has a semiconductor business which follows a Total Customer Solutions strategy which focuses on the automobile industry, among others. The BMW 740 has 50 microprocessors that control many aspects of its functionality, and are critical to differentiation. Motorola works hand in glove with the manufacturers to develop these customized chips - the innovations are joint. As a System Lock-In provider, Intel depends on the rapid development of a complex standard. They have developed five microprocessors, from the 8086 to the Pentium, from 1978 to 1996. This innovation is unique in at least two respects. First, they require backward compatibility, which allows old complementors to work with the new product and ensures the continuation of the standard. Second, having secured the standard, they have the luxury of occasionally incorporating a larger part of the system into their standard to enhance their features and to further extend the interfaces with applications. There is a balancing act in grabbing additional functions from one complementor and in preserving the relationships and open architecture with other complementors, but a proven standard has growing freedom to do this.

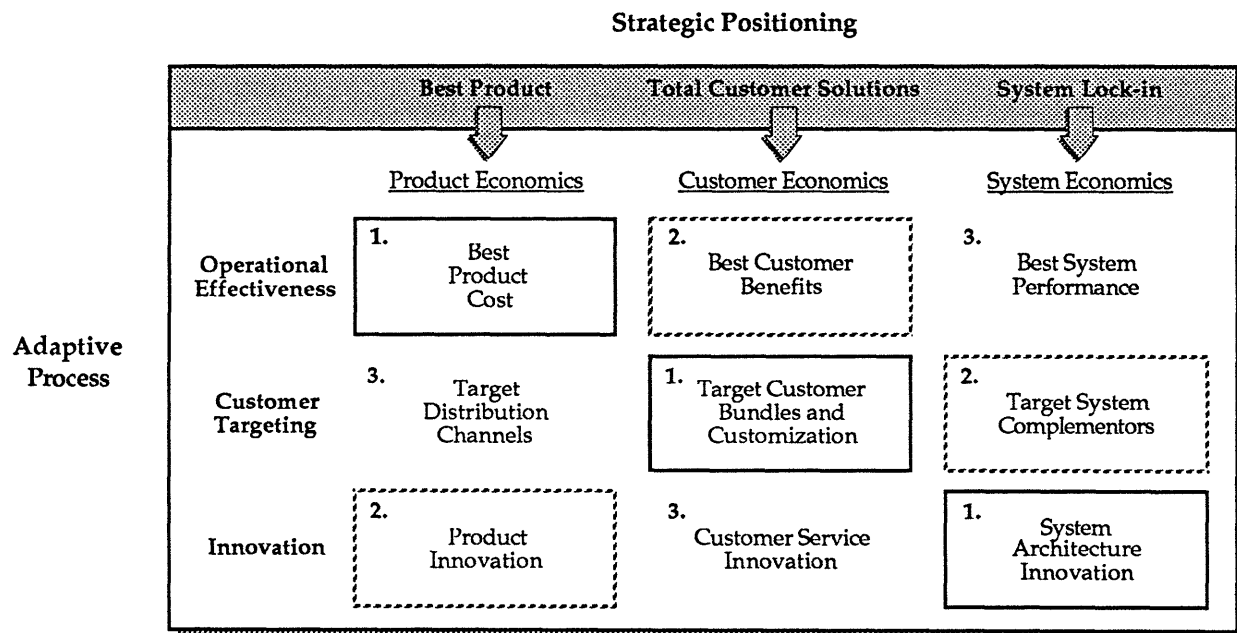
The Priorities Associated With Each Adaptive Process

Our previous discussion of the changing nature of the Adaptive Processes leads us quite naturally to the acceptance of a certain ordering in the importance of the supporting role they play for each strategic option. The concept of assigning priorities to the Adaptive Processes could be controversial. There are some who might insist in giving equal importance to each process and argue for the criticality of having simultaneously low cost, excellent customer targeting, and superior innovation. We believe that the admission of priorities does not dismiss one process from another, but recognizes the intrinsic difference of each strategic position with their unavoidable inherent tradeoffs.

Figure 13 provides the ranking of the Adaptive Process priorities with for each strategic option. Notice that the diagonal - which we refer to as "the consistency corridor" - is the

one that lines up the process with the highest importance with respect to each strategic option.

Figure 13
The Priorities of Adaptive Processes in each Strategic Position



Accordingly, the Best Product option needs the lowest cost infrastructure, which originates in the Operational Effectiveness process. Secondly, it requires the support of a stream of new products to prolong its current vitality into the future. This is given by the Innovation process. Finally, the Customer Targeting process assures the massive access to distribution channels.

The Total Customer Solutions has as its first priority the effective targeting of the customer. This is necessary to identify the required product bundles and to detect the needs for customization. Secondly, the Operational Effectiveness process assures the delivery of the products and services to improve the customer economics. We have given Innovation the third ranking, not because it is not important for joint product development with the customer, but because we feel that the Total Customer Solutions position does not necessarily require the leadership in new products, services and features relative to that called for in the other strategic positions. Often the new product capabilities to support this strategy are originated through alliances and the close collaboration with the customer.

The System Lock-In position has Innovation as its leading Adaptive Process. It contributes to the creation of the systems architecture that allows for standards to be conceived and

owned. The next level of support comes from targeting the systems complementors to consolidate the lock-in position and, quite significantly, the competitors lock-out. Finally in the order of priorities is the Operational Effectiveness that is responsible for improving the system performance. We are not dismissing the importance of this process. We are simply indicating the higher relevance of the two previously cited Adaptive Processes.

Feedback: The Critical Adaptive Mechanism

Feedback is the core attribute of the adaptive processes and addresses the second problem in linking strategy with execution - growing market uncertainties and the requirement for an adaptive strategy. As implementation takes its course, we are compelled to monitor its performance and intended results, and generate corrective actions as needed. Also closely related to the notion of feedback is the one of learning and communication. As our actions are tested and its merits or limitations become apparent, we gain a deeper understanding of the business issues we are intending to solve.

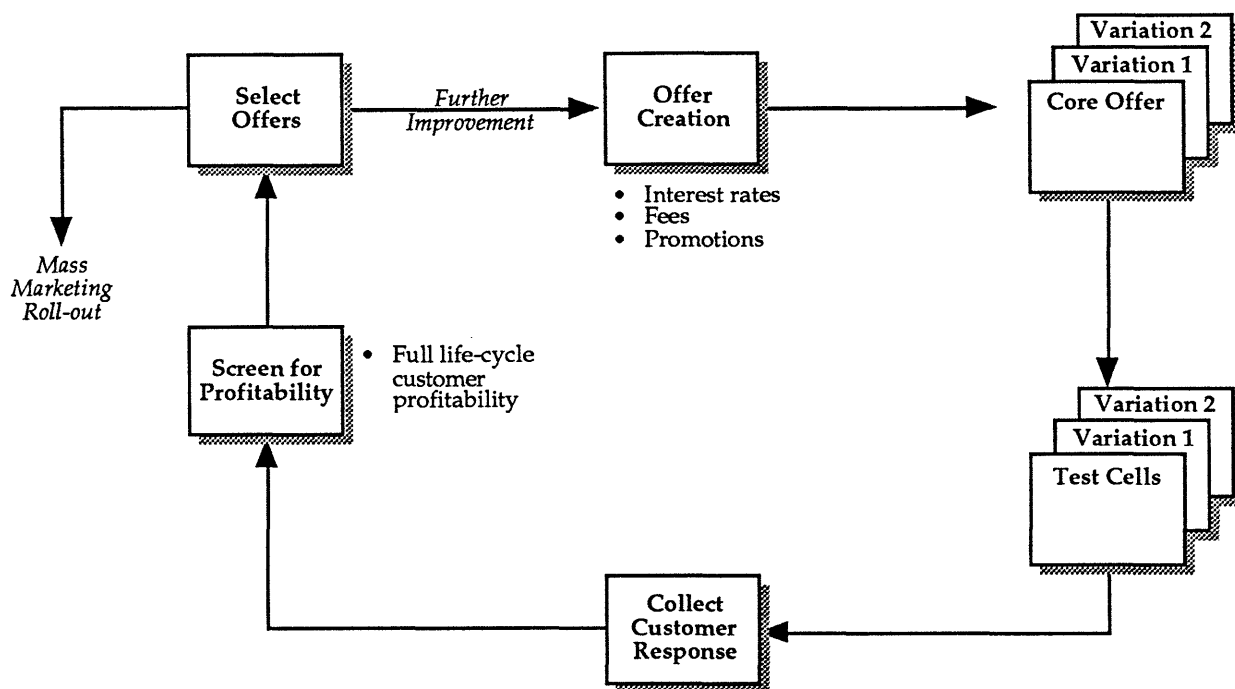
Feedback principles apply to each process and how they interconnect with one another. Capital One provides an illustration of how feedback needs to be incorporated to create an adaptive process.

Capital One has grown from \$ 1 billion to \$ 3 billion in market value over the past three years to become one of the leaders in the credit card industry. The banks that previously owned that business treated it as a plain commodity. Capital One, through a strong emphasis on Customer Targeting, was able to catapult over the once dominant major banks. It realized huge competitive advantage by recognizing the credit card industry wasn't one market, but millions.

While the credit card may seem simple - money and interest rates - the potential variations are infinite. Each variation appeals to a different customer and has a window of opportunity. The challenge is to identify these segments before your competition - and classic market research is not enough. One executive remarked, "we put together our idea of what would be the most attractive offer for a customer segment, based upon market research, then we deliberately vary the offer off of this ideal in terms of rate, price, promotional message, etc. We test all of these variations against different target customer cells. Inevitably, the offer that has the best response was not the original idea, but one of the variations".

The core capability that Capital One employs is an adaptive Customer Targeting process. The lynch pin of the process is in scientific trials, testing, and feedback. At the beginning of the process, see figure 14, they brainstorm offers drawing from a broad range of sources, including intuition and research. Second, the core offer is varied along the key dimensions - product, price, promotion and channel. Third, and with a high degree of scientific rigor, they identify a range of customer cells for test marketing. The final step in the process is to screen the results to select the offers with the highest profit, or net present value in view of the full customer lifecycle.

Figure 14
Capital One: Customer Targeting as an Adaptive Process



In-depth, granular metrics play a critical role in this screening. In the words of Richard Fairbanks, the CEO, "We measure everything". Capital One is an extremely analytical company with the skill to dissect the profitability of the credit industry down to the smallest micro segment. Profit is a complex equation driven by type of customer, how much they use the card, whether they use it for credit or transactions, how promptly they pay their bills, customer tenure, and the costs of acquiring the customer in the first place, to name a few variables. Understanding this equation and having the data to use it is clearly important when you consider that customers show a wide range in profitability and that acquisition

costs have risen from \$ 40 to over \$ 200 per customer over the past ten years. Acquiring the average customer will drive you bankrupt, acquiring and retaining the profitable niches creates a cash machine.

If an offer passes the screen it is rolled out to the target group as a whole. More importantly, information is generated in the process that yield hypotheses for other offers that may be more profitable.

The offer ideas are not pursued with the notion of 0% defects, but rather with the goal of 100% feedback. A family of offers is designed with the understanding that they will not necessarily be successful, but that they provide the seeds for future success. This approach is in stark contrast to conventional "trials". Companies often launch a test of one product variation to a non-segmented group of customers. When this fails there is little learned in the process that can provide clues as to what variation would be more successful

This approach has enabled Capital One to be the first to offer balance transfers, secured cards, among other variations. It is a competence which they feel extends well beyond credit cards and which is applicable to many other products, such as installment loans, auto loans, mortgages, life insurance, mutual funds, and even telecommunications and energy.

All Adaptive Processes, including Operational Effectiveness and Innovation, recognize these same components:

1. **Set Hypotheses:** This should be done in the context of the vision, as expressed by the Triangle, and the role to be played by each Adaptive Process based upon the strategic position of the business.
2. **Identify Variations:** These should reflect the drivers of cost, revenue, and profit for the business. The drivers reflect the assumptions of cause and effect contained in the business model that managers are using. Each Adaptive Process has its own set of drivers which change in accordance with the role of the process as you move strategic positions from Best Product to Total Customer Solutions to System Lock-In.
3. **Trials and Tests:** Admitting that the future is unpredictable - at the heart of this effort is the use of trials and testing. In a basic sense, optimization represents a unreachable ideal that can be more destructive than helpful

and instead we are committed to a continuous stream of experimentation.

4. **Performance Measurement and Screening:** This allows us to separate successes from failure, and to learn from both. In-depth measures are essential - high level, aggregate indicators are too averaged to sort out the pockets of high profitability.

The Adaptive Management Framework

Adaptive Management provides a response to the challenges that business corporations are facing today. It significantly expands the spectrum of available strategic positions by adding a strategic option which puts the customer at the center of the firm's activities, and by capitalizing on the natural architecture of the industry to build proprietary standards which can create an unassailable competitive advantage. This is done while recognizing the continued value of the Best Product option, which is often a winning card for a new entrant that does not have to depend on heavy cost infrastructure.

The Adaptive Processes allow us to link the desired strategic positioning with day-to-day execution through a set of modern integrative mechanisms. Inherent in the Adaptive Processes are trade-offs and different priority assignments which are critical for intelligent implementation. The concept of feedback is central to the adaptation capabilities necessary to compete in a radically changing and uncertain world. Complexity permeates the business environment. It is dangerous to give simple answers to complex questions. Adaptive Management deals with complexity by providing a rich overall framework that integrates the firm options and activities without running the risk of over simplifying the context in which the firm's decisions are made.

¹ Michael E. Porter, Competitive Strategy, Free Press, 1980

² James M. Utterback, Mastering the Dynamics of Innovation, Harvard Business School Press, Boston, MA, 1994

³ The concept of complementors has been introduced by Alan M. Brandenburger and Barry J. Nalebuff, Co-opetition, Doubleday, 1996

⁴ The chief proponents of this thinking were Hammer and Champy: Michael Hammer and James Champy, Reengineering the Corporation, Harper, 1993